

SEQUENCE LISTING

Dcm

<110> LAMBERTY, MIREILLE
<110> BULET, PHILIPPE
<110> BROOKHART, GARY
<110> HOFFMAN, JULES

<120> GENE CODING FOR HELIOMICINE, AND USE THEREOF

<130> A33595 PCT USA

<140> US 09/673,274
<141> 1999-04-12

<150> PCT/FR99/00843
<151> 1999-04-12

<150> FR 98 04933
<151> 1998-04-15

<160> 38

<170> PatentIn Ver. 2.1

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Ser Leu Asp Lys Arg Asp Lys Leu Ile Gly Ser Cys Val Trp Gly Ala
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gtc aac tac act agt gac tgc aac ggc gag tgc aag cgc cgc ggt tac
96 Val Asn Tyr Thr Ser Asp Cys Asn Gly Glu Cys Lys Arg Arg Gly Tyr
20 25 30
aag ggt ggc cat tgt gga tcc ttc gct aac gtt aac tgt tgg tgt gaa
144 Lys Gly Gly His Cys Gly Ser Phe Ala Asn Val Asn Cys Trp Cys Glu
35 40 45

acc
147
Thr

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Asp Lys Leu Ile Gly Ser Cys Val Trp Gly Ala (Val) Asn Tyr Thr Ser
1 5 10 15

gat tgc aac ggt gag tgc aag agg agg ggt tac aag ggt ggt cac tgc
Asp Cys Asn Gly Glu Cys Lys Arg Arg Gly Tyr Lys Gly Gly (His) Cys
96 20 25 30

ggt tcc ttc gct aac gtg aac tgc tgg tgc gag act tgagagctcg
Gly Ser Phe Ala Asn (Val) Asn Cys Trp Cys Glu Thr
142 35 40

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169

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1

5

10

15

tct act ctt ctt ttc ctt gtg atc tct cac tct tgc cgt gcc gat
 95
 Ser Thr Leu Leu Leu Phe Leu Val Ile Ser His Ser Cys Arg Ala Asp
 20 25 30

aag ctt atc ggt tcc tgc gtg tgg ggt gct gtg aac tac act tcc gat
 143
 Lys Leu Ile Gly Ser Cys Val Trp Gly Ala Val Asn Tyr Thr Ser Asp
 35 40 45

tgc aac ggt gag tgc aag agg agg ggt tac aag ggt ggt cac tgc ggt
 191
 Cys Asn Gly Glu Cys Lys Arg Arg Gly Tyr Lys Gly Gly His Cys Gly
 50 55 60

tcc ttc gct aac gtg aac tgc tgg tgc gag act tgagagctcg gcgaggcgaa
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 Ser Phe Ala Asn Val Asn Cys Trp Cys Glu Thr
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 1 5 10

ctt gtg tct act ctt ctt ttc ctt gtg atc tct cac tct tgc cgt
 98
 Leu Val Ser Thr Leu Leu Leu Phe Leu Val Ile Ser His Ser Cys Arg
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Ala
30

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aaagatggaa gc
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gagtgcaaga ggaggggtta
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1 5 10
ctg ctc ttc tgc atc gtg cac ggc gccgaattc

81 Leu Leu Phe Cys Ile Val His Gly
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32

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tgg ggt gct gtg aac tac act tcc gat tgc aac ggt gag tgc aag agg
 144
 Trp Gly Ala Val Asn Tyr Thr Ser Asp Cys Asn Gly Glu Cys Lys Arg

35

40

45

agg ggt tac aag ggt cac tgc ggt tcc ttc gct aac gtg aac tgc
192 Arg Gly Tyr Lys Gly Gly His Cys Gly Ser Phe Ala Asn Val Asn Cys
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tgg tgc gag act tgactcgag
213 Trp Cys Glu Thr
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<222> (533)..(568)

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ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa
180

gaatacgttag aaattgaaaa agaagaacca ggcgaagaaa agaatcttga agacgtaagc
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actgacgaca acaatgaaaa gaagaagata aggtcggtga ttgtgaaaga gacatagagg
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acacatgtaa ggtggaaaat gtaagggcgg aaagtaacct tatcacaaag gaatcttatac
360

ccccactact tatccttta tattttccg tgtcatttt gcccttgagt tttcctata
420

aaggaaccaa gttcggcatt tgtaaaaaca agaaaaaatt tggtgtaagc tattttctt
480

gaagtactga ggatacaact tcagagaaat ttgttaagttt gtagatctcg attctagaag
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gcctgaattc gagctcggtt ccggatccaa ttcccgtatcg ttcaaacatt tggcaataaaa
600

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attacgttaa gcatgtata attaacatgt aatgcgtac gttatttatg agatgggtt
720

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120

ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa
180

gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaatcttga agacgtaagc
240

actgacgaca acaatgaaaa gaagaagata aggtcggtga ttgtgaaaga gacatagagg
300

acacatgtaa ggtggaaaat gtaagggcgg aaagtaacct tatcacaaag gaatcttatac
360

ccccactact tatttttttata tattttccg tgcattttt gcccttgagt tttcctatat
420

aaggaaccaa gttcggcatt tgtgaaaaca agaaaaattt tggtgtaagc tattttcttt
480

gaagtactga ggataacaact tcagagaaat ttgttaagttt gtagatctcg attctaga
538

atg gcc tgc acc aac aac gcc atg agg gcc ctc ttc ctc ctc gtg ctc
586

Met Ala Cys Thr Asn Asn Ala Met Arg Ala Leu Phe Leu Leu Val Leu
1 5 10 15

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634

Phe Cys Ile Val His Gly Asp Lys Leu Ile Gly Ser Cys Val Trp Gly
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gct gtg aac tac act tcc gat tgc aac ggt gag tgc aag agg agg ggt
682

Ala Val Asn Tyr Thr Ser Asp Cys Asn Gly Glu Cys Lys Arg Arg Gly
35 40 45

tac aag ggt ggt cac tgc ggt tcc ttc gct aac gtg aac tgc tgg tgc
730

Tyr Lys Gly Gly His Cys Gly Ser Phe Ala Asn Val Asn Cys Trp Cys
50 55 60

gag act tgactcgagg gggggcccg taccggatcc aattcccgat cgttcaaaca
786

Glu Thr
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aatttctgtt gaattacgtt aagcatgtaa taattaacat gtaatgcattg acgttattta
906

tgagatgggt ttttatgatt agagtccgc aattatacat ttaatacgcg atagaaaaca
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<400> 38

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